

Claim listing:

1. (original) A composite reflector for a linear array of LEDs having a length, each of said LEDs having an optical axis extending from an area of light emission, said composite reflector comprising:

a row of substantially circular concave reflecting surfaces, each said concave reflecting surface substantially surrounding one said area of light emission and extending axially and outwardly to an upper edge; and

a pair of longitudinal reflecting surfaces extending axially and outwardly from lower limits adjacent said upper edges and laterally spaced apart by said row of substantially circular reflecting surfaces to define a trough axially thereabove.

2. (original) The composite reflector of claim 1, wherein each said longitudinal reflecting surface comprises a plurality of longitudinally extending convex ribs.

3. (original) The composite reflector of claim 1, wherein each said longitudinal reflecting surface comprises a plurality of longitudinally extending convex ribs arranged on a parabola projected along the length of said array.

4. (original) The composite reflector of claim 1, wherein each said longitudinal reflecting surface comprises a plurality of longitudinally extending convex ribs, each said rib having a length and a different width.

5. (original) The composite reflector of claim 1, wherein each said longitudinal reflecting surface comprises a plurality of longitudinally extending convex ribs, each said rib having a length and defined by a radius of curvature perpendicular to said length.

6. (original) The composite reflector of claim 2, wherein the convex shape of each rib is defined by a different radius of curvature.

7. (original) The composite reflector of claim 1, wherein each said substantially circular concave reflecting surfaces is defined by a parabola rotated about said optical axis.

8. (original) The composite reflector of claim 7, wherein said parabola has a focus coincident with said area of light emission.

9. (original) A warning light comprising:

an array of LEDs, each said LED comprising a die from which light is emitted and a lens covering said die, said lens having an optical axis originating at said die, said LEDs being arranged along a line extending through said dies to form a linear LED array having a length; and

a reflector body having a back side defining a plurality of openings for receiving the lens of each LED and a front side defining a composite reflecting surface comprising:

a row of concave reflecting surfaces, each said concave reflecting surface defined by a parabola having a focus coincident with the die of a received LED and rotated about the optical axis of the received LED, said reflector extending axially above said LED to a rim having a diameter; and

a pair of longitudinal reflecting surfaces extending upwardly and outwardly from a lower edge substantially tangent to said rims, said longitudinal reflecting surfaces being laterally separated from each other by a distance substantially equal to the diameter of said rims, said pair of longitudinal reflecting surfaces extending substantially the length of said linear LED array and defining a trough above said row of concave reflecting surfaces.

10. (original) The warning light of claim 9, wherein each said longitudinal reflecting surface comprises a plurality of convex ribs.

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11. (original) The warning light of claim 9, wherein each said longitudinal reflecting surface is a linear substantially parabolic surface defined by said parabola projected along the line extending through said dies.

12. (original) The warning light of claim 9, wherein each said longitudinal reflecting surface comprises a plurality of convex ribs, each rib having a different width measured perpendicular to said array and along said reflecting surface.

13. (original) The warning light of claim 9, wherein each said longitudinal reflecting surface comprises a plurality of ribs with a convex surface defined by a different radius of curvature.